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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Damon Barry

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EXAMINER

KISS, ERIC B

ART UNIT

PAPER NUMBER

2192

DATE MAILED: 04/21/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/607,397	Applicant(s) BARRY ET AL.	
	Examiner Eric B. Kiss	Art Unit 2192	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 February 2006.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4,7,10-17 and 20-28 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4,7,10-17 and 20-28 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 6 February 2006 has been entered.

Claims 1-4, 7, 10-17, and 20-28 are pending.

Response to Arguments

2. Applicant's arguments filed 6 February 2006 have been fully considered but they are not persuasive.

Regarding the claimed hierarchy of test cases, test suites, and test modules, there is no dispute that the test suites of TETware comprise one or more test cases. (*see* Applicant's Remarks p. 12.) Further, as Applicant acknowledges, within the defined TETware directory structure, test suites are organized into individual test suite directories under the test suite root directory, and test case names are interpreted relative to the test suite root directory. (*see* Applicant's Remarks p. 11.) Applicant's specification defines "test module" as "a set of one or more test suites." (Specification p. 8, line 17.) Accordingly, as the individual test suites of TETware are contained in test suite directories, and the test suite directories are contained in the test suite root directory, it follows that either the test suite directories or the test suite root directory meet the recited "test module". Further, the filenames of individual test cases, being

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specified relative to the test suite root directory (and the test suite directory therein), correspond to the test modules by pointing to their contents.

The test scenario of TETware specifies which specific test cases of a specific test suite in a specific test suite directory, relative to the test suite root directory, are to be executed. In order for this functionality to be realized, TETware must be able to traverse (scan and discover) the hierarchical directory structure.

Claim Rejections - 35 USC § 101

3. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

4. Claims 15-17 and 20-23 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

Claims 15-17 and 20-23 are recited in terms of computer readable media for providing computer program code. The specification discloses such computer readable media as embracing transitory embodiments, *i.e.*, signals encoded with functional descriptive material. (Specification p. 9, ll. 3-7.) The Office's current position is that claims involving signals encoded with functional descriptive material do not fall within any of the categories of patentable subject matter set forth in 35 U.S.C. § 101, and such claims are therefore ineligible for patent protection. *See* 1300 OG 142 (November 22, 2005) (in particular, see Annex IV(c)).

To expedite a complete examination of the instant application, the claims rejected under 35 U.S.C. §101 (non-statutory) above are further rejected as set forth below in anticipation of Applicant amending these claims to place them within the four statutory categories of invention.

Claim Rejections - 35 USC § 102

5. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

6. Claims 1, 2, 4, and 7-27 are rejected under 35 U.S.C. 102(b) as being anticipated by the TETware Release 3.3 software product (hereinafter TETware) released September 18, 1998 by The Open Group, as evidenced by: “TETware User Guide, Revision 1.2” (hereinafter TET_UG), “Release Notes for TETware Release 3.3” (hereinafter TET_RN), and “TETware Programmers Guide, Revision 1.2” (hereinafter TET_PG).

As per claim 1, TETware is disclosed with a computer system comprising:

one or more program modules (test suite directories) storing one or more available test cases (see, for example, section 2.5.2 of TET_PG, which describes “Test scenario definitions” that specify which test cases of a test suite are to be executed), each comprising a set of instructions for testing a feature of the computer program through a language and format independent interface (the test cases are built and executed, regardless of their source language, through the same test case controller; see, for example, the description of build mode in section 6.2.3 of TET_UG; the use of different source languages to build cases is also disclosed, e.g., C, C++, Shell, Korn Shell, or Perl; see, for example, section 2.4 of TET_UG describing the API components as linkable object code);

a harness client comprising a set of instructions that (i) receives user input specifying one or more filenames corresponding to the one or more program modules (see, for example, section 5.3.2 of TET_UG), (ii) employs the connector to scan for and discover the one or more available test cases that are stored in the one or more program modules and to organize the one or more available test cases into a test case hierarchy (see, for example, section 5.3.2 of TET_UG; test cases are organized into test suites, which are organized in test suite directories under the test suite root directory), and (iii) receives user input for indicating which of the one or more available test cases in the test case hierarchy are selected to be executed on the computer program (see, for example, section 5.3.2.2 of TET_UG; the scenario file specifies which specific test cases of a specific test suite in a specific test suite directory, relative to the test suite root directory, are to be executed);

a harness comprising a set of instructions that (i) receives the test case hierarchy, (ii) traverses the test case hierarchy, and (iii) executes each of the one or more available test cases that is selected to be executed (test scenario) on the computer program using the corresponding language and format independent interface of the selected test case to ensure that the computer program processes as intended (test case controller; see sections 2.1 and 2.2 of TET_UG; the test cases are built and executed, regardless of their source language, through the same test case controller; see, for example, the description of build mode in section 6.2.3 of TET_UG);

a connector, comprising a set of instructions that (i) scans for the one or more available test cases stored in the one or more program modules, (ii) organizes the one or more available test cases into the test case hierarchy by extracting the one or more available test cases from the one or more program modules (see, for example, section 2.5.2 of TET_PG, which describes

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“Test scenario definitions” that specify which test cases of a test suite are to be executed; section 2.4 of TET_UG; and section 2.4.4 of TET_PG describing the handling of non-API test cases), and (iii) selectively integrates an interface between the test case hierarchy and the harness regardless of the language or format in which the one or more available test cases were written (test case managers and API libraries; see section 2.4 of TET_UG; see also section 2.4.4 of TET_PG describing the handling of non-API test cases);

a processor for executing each selected test case, the harness, the harness client, and the connector (inherent in the operation of the UNIX and WINDOWS operating systems used to implement TETware; see section 1.1 of TET_UG).

TETware is further disclosed with one or more test cases comprising a test suite in the hierarchy and one or more test suites comprising a test module in the hierarchy (see section 2.2 of TET_UG; see further, section 4.1 of TET_PG and 5.3.2.1 of TET_UG). When an individual scenario from the scenario file is processed, one or more test cases may be invoked (as described, for example, 4.2.4.3 of TET_PG and 5.3.2.4 of TET_UG).

As per claim 2, TETware is further disclosed with the set of instructions of the harness and the set of instructions of the connector utilizing an architecture that defines a means for accessing a resource over a network (see section 2.6.3 of TET_UG).

As per claim 4, TETware is disclosed with a method comprising:

The harness client receiving user input that (i) specifies a search property to identify one or more test cases of interest (see, for example, section 5.3.2 of TET_UG), (ii) selects one or

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more test cases from the one or more test cases of interest to execute on the computer program (see, for example, section 5.3.2.4 of TET_UG), and (iii) specifies how the one or more selected test cases are to be executed on the computer program (see, for example, section 5.3.2.2 of TET_UG);

the connector scanning the binary program module (test suite) storing the plurality of individually accessible test cases, for one or more test cases of interest (see, for example, section 2.5.2 of TET_PG, which describes “Test scenario definitions” that specify which test cases of a test suite are to be executed), each test case having a language and format independent interface for executing the test case on the computer program regardless of the language or format used to develop the test case (the test cases are built and executed, regardless of their source language, through the same test case controller; see, for example, the description of build mode in section 6.2.3 of TET_UG);

the connector extracting the one or more test cases of interest from the binary program module (see, for example, section 2.5.2 of TET_PG, which describes “Test scenario definitions” that specify which test cases of a test suite are to be executed);

the connector organizing one or more test cases into a test case hierarchy (test suite structure; see section 2.2 of TET_UG; see, for example, section 2.5.2 of TET_PG, which describes “Test scenario definitions” that specify which test cases of a test suite are to be executed);

the connector interfacing a harness with the one or more test cases of interest (see section 6.4 of TET_UG; see, for example, section 2.5.2 of TET_PG, which describes “Test scenario definitions” that specify which test cases of a test suite are to be executed), wherein the

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interfacing allows the harness to recognize and execute the one or more test cases of interest regardless of the language or format in which the one or more test cases of interest were developed (test case controller; see sections 2.1 and 2.2 of TET_UG; the test cases are built and executed, regardless of their source language, through the same test case controller; see, for example, the description of build mode in section 6.2.3 of TET_UG); and

the harness traversing the test case hierarchy and executing each of the one or more selected test cases to test the computer program (see the description of the test case controller beginning on page 105 of TET_UG).

TETware is further disclosed with one or more test cases comprising a test suite in the hierarchy and one or more test suites comprising a test module in the hierarchy (see section 2.2 of TET_UG; see further, section 4.1 of TET_PG and 5.3.2.1 of TET_UG). When an individual scenario from the scenario file is processed, one or more test cases may be invoked (as described, for example, 4.2.4.3 of TET_PG and 5.3.2.4 of TET_UG).

As per claim 7, TETware is further disclosed with a step of determining whether one or more of the test cases of interest are identified as being deselected, wherein a deselected test case is not executed on the computer program (see, for example, the “-n” command line option of the test case controller on page 107 of TET_UG).

As per claims 10 and 11, TETware is further disclosed with excluding test cases determined to be deselected from a selection of a test suite or scenario (see, for example, the “-n” command line option of the test case controller on page 107 of TET_UG).

As per claims 12-14, TETware is further disclosed with the step of traversing further including executing the one or more test cases on a thread pool comprising one or more threads, and further discloses testing single-threaded and multi-threaded (thread-safe) models (see section 17.4 of TET_PG).

As per claims 15-17, these are computer-readable medium versions of the method discussed above (claim 4), wherein all limitations have been addressed as set forth above. Furthermore, the use of such a computer-readable medium containing executable code is inherently necessary for the operation of the UNIX and WINDOWS operating systems used to implement TETware (see section 1.1 of TET_UG).

As per claim 20, TETware is further disclosed with user-selected (through a harness client user interface) test cases (see the description of the test case controller and command line usage beginning on page 107 of TET_UG).

As per claims 21-23, see the disclosure applied above in the rejection of claims 12-14.

As per claim 24, TETware is disclosed with a method comprising:

specifying one or more filenames for identifying one or more program modules storing one or more test cases, each comprising a set of instructions for testing a feature of the computer program through a language and format independent interface (see, for example, section 5.3.2 of TET_UG; the test cases are built and executed, regardless of their source language, through the same test case controller; see, for example, the description of build mode in section 6.2.3 of TET_UG);

identifying the one or more test cases within the one or more program modules (see, for example, section 2.5.2 of TET_PG, which describes “Test scenario definitions” that specify which test cases of a test suite are to be executed);

translating the identified one or more test cases into a test case hierarchy (a test scenario see, for example, section 2.5.2 of TET_PG, which describes “Test scenario definitions” that specify which test cases of a test suite are to be executed);

indicating that the one or more test cases in the test case hierarchy are to be executed on the computer program (see, for example, section 5.3.2 of TET_UG);

providing an interface to the test case hierarchy in order to recognize and execute the one or more test cases regardless of the language or format in which the one or more test cases were written (test case controller; see sections 2.1, 2.2, and 2.4 of TET_UG; the test cases are built and executed, regardless of their source language, through the same test case controller; see, for example, the description of build mode in section 6.2.3 of TET_UG); and

running each of the one or more test cases in the test case hierarchy to test the computer program (test case managers and API libraries; see section 2.4 of TET_UG; see also section 2.4.4 of TET_PG describing the handling of non-API test cases; the test cases are built and executed, regardless of their source language, through the same test case controller; see, for example, the description of build mode in section 6.2.3 of TET_UG).

As per claims 25-27, TETware is further disclosed with executing the one or more test cases on a thread pool comprising one or more threads, and further testing single-threaded and multi-threaded (thread-safe) models (see section 17.4 of TET_PG).

As per claim 28, Applicant's specification defines "test module" as "a set of one or more test suites." (Specification p. 8, line 17.) Accordingly, as the individual test suites of TETware are contained in test suite directories, and the test suite directories are contained in the test suite root directory (TET_UG section 5.2.6; TET_PG section 2.3), it follows that either the test suite directories or the test suite root directory meet the recited "test module". Further, the filenames of individual test cases, being specified relative to the test suite root directory (and the test suite directory therein), correspond to the test modules by pointing to their contents.

Claim Rejections - 35 USC § 103

7. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

8. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over TETware and the associated cited documentation as applied to claim 1 above, and further in view of U.S. Patent No. 6,505,342 to Hartmann et al.

As per claim 3, TETware is disclosed with such a system (see disclosure applied above to claim 1), but is not expressly disclosed with a COM technology architecture. However, Hartmann et al. teach a system for testing components that use middleware, such as COM/DCOM (see column 2, line 61 through column 3, line 4). Therefore, it would have been obvious to one having ordinary skill in the computer art at the time the invention was made to modify the system of TETware to include a COM architecture as per the teaching of Hartmann et al. One

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would be motivate to do so to gain the advantage of supporting and testing implementations in a standardized object-oriented middleware.

Conclusion

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

10. Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Eric B. Kiss whose telephone number is (571) 272-3699. The Examiner can normally be reached on Tue. - Fri., 7:00 am - 4:30 pm. The Examiner can also be reached on alternate Mondays.

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor, Tuan Dam, can be reached on (571) 272-3695. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Any inquiry of a general nature should be directed to the TC 2100 Group receptionist: 571-272-2100.

EBK / EBK
April 14, 2006

Chameli C. Das
CHAMELI C. DAS
PRIMARY EXAMINER

4/14/06